

Title (en)

ABNORMALITY DIAGNOSING DEVICE FOR PLANETARY GEAR SPEED REDUCER, AND CONSTRUCTION MACHINE

Title (de)

ANOMALIEDIAGNOSEVORRICHTUNG FÜR PLANETENGETRIEBEUNTERSETZUNGSGETRIEBE UND BAUMASCHINE

Title (fr)

DISPOSITIF DE DIAGNOSTIC D'ANOMALIE POUR RÉDUCTEUR DE VITESSE À TRAIN PLANÉTAIRE, ET MACHINE DE CONSTRUCTION

Publication

EP 4428514 A1 20240911 (EN)

Application

EP 22889960 A 20221101

Priority

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- JP 2022040934 W 20221101

Abstract (en)

An abnormality diagnosis device for a planetary gear speed reducer includes a second vibration sensor attached to a housing of a hydraulic motor having an output shaft coupled to the planetary gear speed reducer. A controller computes a peak frequency F_m of the hydraulic motor and a speed of rotation of the hydraulic motor on the basis of second vibration data acquired through the second vibration sensor, compute, on the basis of the computed speed of rotation, the number of a plurality of gears included in the planetary gear speed reducer, and the number of teeth of each of the gears, characteristic frequencies f_d of the plurality of gears, and determines presence or absence of abnormality in the plurality of gears on the basis of the peak frequency F_m of the hydraulic motor and amplitudes at the characteristic frequencies f_d of first vibration data acquired through a first vibration sensor attached to the planetary gear speed reducer.

IPC 8 full level

G01M 13/028 (2019.01); **G01M 99/00** (2011.01)

CPC (source: EP KR)

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